

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Previously Presented): A processing element for a semiconductor manufacturing system, said processing element comprising:

a cylindrical unit including a passive polymeric component and an active component;
said cylindrical unit having a first radially-extending surface and a second radially extending surface opposite the first radially-extending surface, wherein an inside diameter of the cylindrical unit forms an opening for disposition of the cylindrical unit around a substrate position in the semiconductor manufacturing system and the second radially extending surface is a substantially planar surface for disposition on a substrate holder in the semiconductor manufacturing system;

said passive polymeric component configured to erode when exposed to a plasma process in said semiconductor manufacturing system; and

said active component included as a part of said passive component and configured to alter the chemistry of the processing when exposed to the plasma process.

Claim 2 (Withdrawn): The processing element as recited in claim 1, wherein said active component is embedded within said passive component.

Claim 3 (Original): The processing element as recited in claim 1, wherein said active component comprises at least one of a solid material and a liquid material.

Claim 4 (Withdrawn): The processing element as recited in claim 1, wherein said active component comprises an organo-metallic compound.

Claim 5 (Withdrawn): The processing element as recited in claim 4, wherein said organo-metallic compound comprises at least one of yttrium, aluminum, iron, titanium, zirconium, and hafnium.

Claim 6 (Withdrawn): The processing element as recited in claim 4, wherein said organo-metallic compound comprises at least one of yttrium tris hexafluoroacetylacetonate, yttrium tris(2,2,6,6-hexamethyl)-3,5-heptanedionate, yttrium tris diphenylacetylacetonate, 1,2-diferrocenylethane, aluminum tris(2,2,6,6-tetramethyl)-3,5-heptanedionate, aluminum lactate, aluminum-8-hydroxyquinoline, bis(cyclopentadienyl)titanium pentasulfide, bis(pentamethylcyclopentadienyl) hafnium dichloride, zirconium acetylacetonate, zirconium tetra(2,2,6,6-tetramethyl)-3,5-pentanedionate, zirconium tetra(1,5-diphenylpentane-2,4-dione), ferrocene aldehyde, ferrocene methanol, ferrocene ethanol, ferrocene carboxylic acid, ferrocene dicarboxylic acid, 1,2-diferrocene ethane, 1,3-diferrocene propane, 1,4-diferrocene butane and decamethylferrocene.

Claim 7 (Withdrawn): The processing element as recited in claim 1, wherein said active component comprises an ultraviolet (UV) absorber.

Claim 8 (Withdrawn): The processing element as recited in claim 7, wherein said UV absorber comprises at least one of benzophenone, benzotriazole, and hindered amine stabilizers (HALS).

Claim 9 (Withdrawn): The processing element as recited in claim 1, wherein said active component comprises an antioxidant.

Claim 10 (Withdrawn): The processing element as recited in claim 9, wherein said antioxidant comprises at least one of hindered phenols, aromatic amines, organophosphorous compounds, thiosynergists, hydroxylamine, lactones, and acrylated bis-phenols.

Claim 11 (Original): The processing element as recited in claim 1, wherein said active component comprises a distribution of solid particles encapsulated within said passive component.

Claim 12 (Withdrawn): The processing element as recited in claim 11, wherein said distribution of solid particles within said passive component comprises variations in at least one of a particle size, a particle composition, and a particle concentration.

Claim 13 (Withdrawn): The processing element as recited in claim 1, wherein said processing element is configured to be temperature controlled in order to alter a rate at which said active component is exposed to said plasma process.

Claim 14 (Withdrawn): The processing element as recited in claim 1, wherein said processing element is configured geometrically to affect a rate at which said active component is exposed to said plasma process.

Claim 15 (Withdrawn): The processing element as recited in claim 1, wherein said processing element is cylindrical, and an inner surface of said processing element comprises, a groove structure formed thereon and configured to expose a substantially constant surface area of said inner surface as said inner surface recedes during erosion by said plasma process.

Claim 16 (Withdrawn): The processing element as recited in claim 1, wherein said passive component comprises at least one of a polymer, a porous polymer, a foam, and a gel.

Claim 17 (Withdrawn): The processing element as recited in claim 16, wherein said polymer comprises at least one of Kapton and polyimide.

Claim 18 (Previously Presented): A semiconductor manufacturing system for processing a substrate using a plasma process, comprising:

a processing chamber configured to facilitate said plasma process;

a substrate holder coupled to said processing chamber and configured to support said substrate;

a gas distribution system coupled to said processing chamber and configured to introduce a process gas to said processing chamber;

a plasma source coupled to said processing chamber and configured to generate a plasma in said processing chamber;

at least one processing element coupled to at least one of said processing chamber, said substrate holder, said gas distribution system, and said plasma source; and

said at least one processing element comprising,

a cylindrical unit including a passive polymeric component and an active component,

said cylindrical unit having a first radially-extending surface and a second radially extending surface opposite the first radially-extending surface, wherein an inside diameter of the cylindrical unit forms an opening for disposition of the cylindrical unit around a substrate position in the semiconductor manufacturing system and the second radially extending

surface is a substantially planar surface for disposition on a substrate holder in the semiconductor manufacturing system,

said passive polymeric component configured to erode when exposed to a plasma process in said semiconductor manufacturing system, and

said active component included as a part of said passive component and configured to alter the chemistry of the processing when exposed to the plasma process

Claim 19 (Withdrawn): The semiconductor manufacturing system as recited in claim 18, wherein said active component is embedded within said passive component.

Claim 20 (Original): The semiconductor manufacturing system as recited in claim 18, wherein said active component comprises at least one of a solid material and a liquid material.

Claim 21 (Withdrawn): The semiconductor manufacturing system as recited in claim 18, wherein said active component comprises at least one of an organo-metallic compound, an ultraviolet absorber, and an antioxidant.

Claim 22 (Original): The semiconductor manufacturing system as recited in claim 18, wherein said active component comprises a distribution of solid particles encapsulated within said passive component.

Claim 23 (Withdrawn): The semiconductor manufacturing system as recited in claim 22, wherein said distribution of solid particles within said passive component comprises varieties in at least one of a particle size, a particle composition, and a particle concentration.

Claim 24 (Withdrawn): The semiconductor manufacturing system as recited in claim 18, wherein said processing element is configured to be temperature controlled in order to alter a rate at which said active component is exposed to said plasma process.

Claim 25 (Withdrawn): The semiconductor manufacturing system as recited in claim 18, wherein said at least one processing element is configured geometrically to affect a rate at which said active component is exposed to said plasma process.

Claim 26 (Withdrawn): The semiconductor manufacturing system as recited in claim 18, wherein said passive component comprises at least one of a polymer, a porous polymer, a foam, and a gel.

Claims 27 -39 (Canceled)

Claim 40 (Previously Presented): The processing element as recited in claim 1, wherein the passive polymeric component comprises a cylindrical ring.

Claim 41 (Currently Amended): The processing element as recited in claim 1, wherein the passive polymeric component comprises a surface exposed to the plasma process, prior to surface exposure to the plasma process, having a greater area than an opposite surface in contact with a substrate holder surface.

Claim 42 (Previously Presented): The semiconductor manufacturing system as recited in claim 18, wherein the passive polymeric component comprises a cylindrical ring.

Claim 43 (Currently Amended): The semiconductor manufacturing system as recited in claim 18, wherein the passive polymeric component comprises a surface exposed to the plasma process, prior to surface exposure to the plasma process, having a greater area than an opposite surface in contact with a substrate holder surface.

Claim 44 (New): The processing element as recited in claim 1, wherein the passive polymeric component comprises an insulating material.

Claim 45 (New): The semiconductor manufacturing system as recited in claim 18, wherein the passive polymeric component comprises an insulating material.